

**IN THE CLAIMS:**

Please cancel claims 1-14 without prejudice or disclaimer, and substitute new Claims 15-28 therefor as follows:

Claims 1-14 (Cancelled).

15. (New) A method of producing a holey optical fiber preform, comprising:

forming a porous preform having a longitudinal direction; and  
- forming at least one hole extending through the porous preform along the longitudinal direction, wherein said at least one hole is formed by drilling the porous preform.

16. (New) The method according to claim 15, wherein the density of the porous preform in a region thereof wherein the at least one hole is to be formed has a maximum variation of  $\pm 2\%$ .

17. (New) The method according to claim 15, further comprising submitting the porous preform to a consolidation process after said drilling.

18. (New) The method, according to claim 17, further comprising submitting the porous preform to a dehydration process after said drilling.

19. (New) The method according to claim 15, wherein said porous preform is a soot preform formed by means of flame hydrolysis, particularly a glass soot preform.

20. (New) The method according to claim 15, wherein said glass soot preform is formed by means of an Outside Vapor Deposition (OVD) process or a Vapor Axial Deposition (VAD) process.

21. (New) The method according to claim 15, wherein said glass soot preform has a density in a range from 0.25 to 0.8 g/cm<sup>3</sup>.

22. (New) The method according to claim 21, wherein the density of the glass soot preform is in a range from 0.5 to 0.7 g/cm<sup>3</sup>.

23. (New) The method according to claim 15, wherein the porous preform is a gel preform.

24. (New) A method of producing a holey optical fiber having at least one hole extending through a fiber longitudinal direction, comprising:

forming a holey optical fiber preform by means of the method according to any one of claims 15 to 23; and

drawing the holey optical fiber preform.

25. (New) A device for drilling holes in a porous preform, comprising:  
a porous preform supporting structure, comprising an arrangement of  
porous preform holders adapted to engage an outer surface of the porous preform for  
keeping the porous preform steady;

a drill for actuating at least one drilling bit; and

a position adjustment structure for adjusting a relative position of the  
porous preform and the drill.

26. (New) The device according to claim 25, wherein the porous  
preform holders have an active surface intended for contacting the porous preform, said  
active surface being made of an elastomeric material, rubber, or silicone rubber.

27. (New) The device according to claim 25, further comprising a tilt  
mechanism adapted to tilt an axis of the porous preform supporting structure with  
respect to a reference plane.

28. (New) The device according to claim 25, further comprising at least  
one drilling mask, having formed therein a respective predefined pattern of holes, said  
mask being associatable with the porous preform for guiding the drilling of holes.